



# Remote Sensing Applications Division (RSAD)

## CDR Program Office

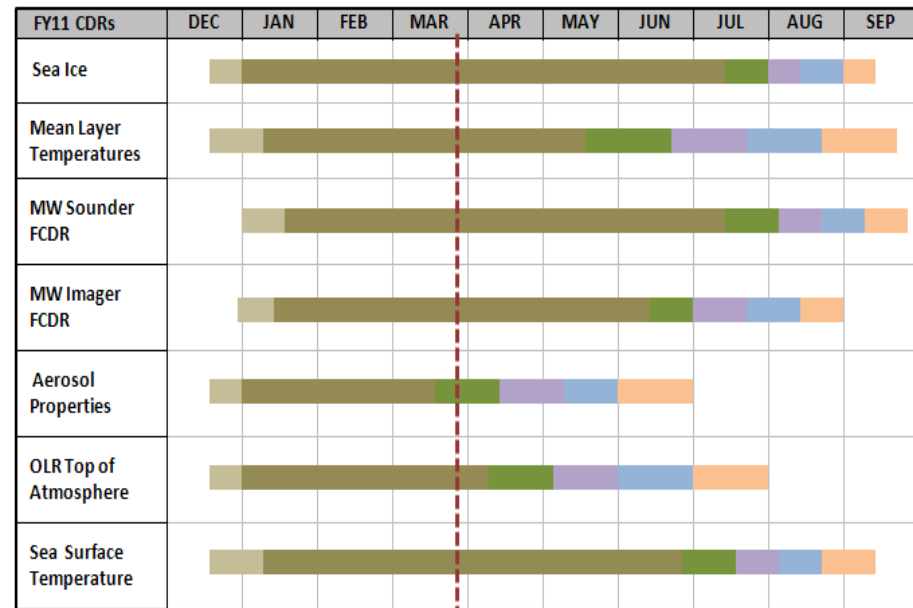
Weekly Report for March 25, 2011  
John J Bates, Chief

# CDR Program Office

## FY11 Climate Data Records

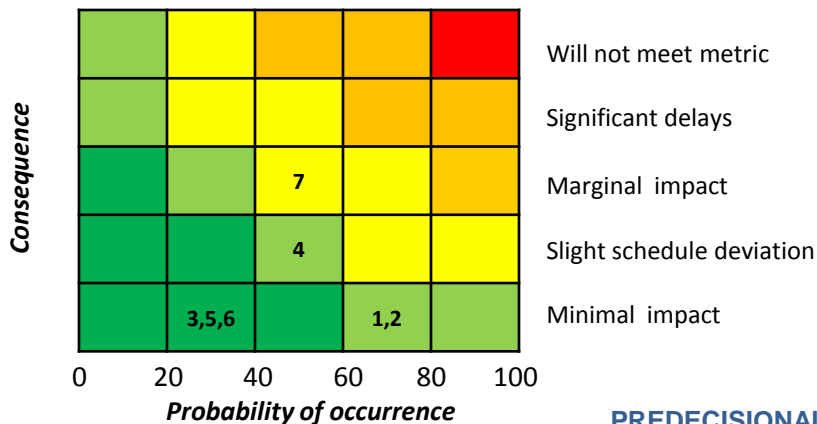
### Weekly Report – Mar 25, 2011

1. **Sea Ice**
  - PI can't work on docs, data, or code until mid Apr
2. **Mean Layer Temperatures**
  - NSTR
3. **Microwave (MW) Sounder FCDR**
  - PI concerned about source code release
4. **Microwave (MW) Imager FCDR**
  - POC doing all documentation – making good progress
5. **Aerosol Properties**
  - Subsetting CDR and converting to NetCDF
6. **Outgoing Longwave (LW) - Top of Atmosphere**
  - Received final code delivery – close to an FOC CDR
7. **Sea Surface Temperature**
  - Documentation delivery schedule TBD



R2O PHASE: ASSESSMENT SUBMISSION PREP TRANSFER VALIDATION ARCHIVE ACCESS

### Risk Matrix



### Risk and Mitigation

#### Sea Ice

- PI can't work on CDR until mid Apr – need to monitor progress closely

#### MW Imager FCDR

- POC is responsible for file conversion and documentation
- New Schedule shown

#### Sea Surface Temp

- Source code documentation requires additional hire
- Reordered various portions of data to try and fill in data gaps

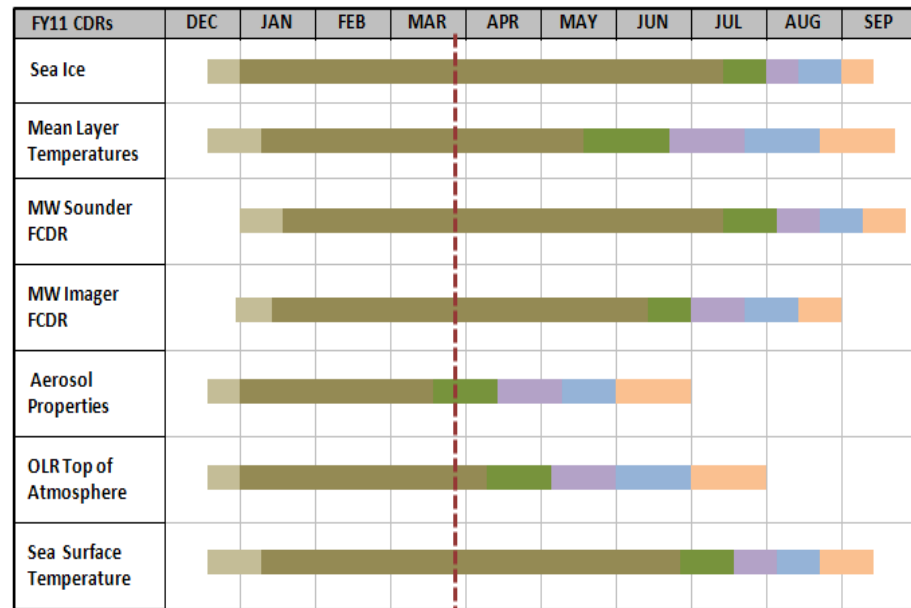
PREDECISIONAL DRAFT INFORMATION

# CDR Program Office

## FY11 Climate Data Records

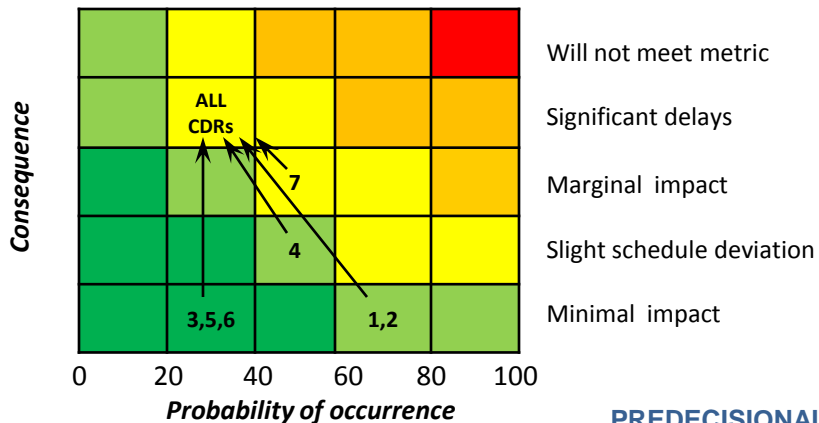
### Weekly Report – Apr ??, 2011

- ① **Sea Ice**
  - PI can't work on docs, data, or code until mid Apr
- ② **Mean Layer Temperatures**
  - NSTR
- ③ **Microwave (MW) Sounder FCDR**
  - PI concerned about source code release
- ④ **Microwave (MW) Imager FCDR**
  - POC doing all documentation – making good progress
- ⑤ **Aerosol Properties**
  - Subsetting CDR and converting to NetCDF
- ⑥ **Outgoing Longwave (LW) - Top of Atmosphere**
  - Received final code delivery
- ⑦ **Sea Surface Temperature**
  - Documentation delivery schedule TBD



R2O PHASE: ASSESSMENT SUBMISSION PREP TRANSFER VALIDATION ARCHIVE ACCESS

### Risk Matrix



### Risk and Mitigation

#### ALL CDRs

- No place for data
- No support from ITB
- No immediate solution in site
- Potential management action required

PREDECISIONAL DRAFT INFORMATION

# Sea Ice

**CDR Product:** TCDR - Sea ice concentration/extent/area estimates, 1979-2010 (20 GB)

**GEOSS Societal Benefit:** Climate, Water, Ecosystems, Agriculture

## Project Status

- PI not available until **mid Apr** – revised schedule shown below
- Started on Submission Agreement document
  - Sent and received info requested by Phil
- Sent CATBD Template to PI

## Next Action / Milestone

- PI to send POC sample doc and code



## Project Risks

- PI unable to work on code, docs and data conv until mid Apr
- NSIDC will be serving the data to the public, PI concerned about long term support
- The codes that will be delivered are modular pieces of a much larger code and will require effort to separate and document

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	100	12/7/2010	1/7/2011												
2	Transfer Prep	40	1/7/2011	7/15/2011												
2a	Comment Source Code	50	4/15/2011	7/15/2011												
2b	Create Docs (CATBD, Flow Chart, MM, Readme)	50	1/7/2011	7/15/2011												
2c	Convert data from binary to NetCDF	0	3/1/2011	7/15/2011												
3	Transfer Code, Docs, and Data	0	6/1/2011	7/30/2011												
4	Validate Code, Docs, and Data	0	6/15/2011	8/15/2011												
5	Archive Code, Docs, and Data	0	8/1/2011	8/31/2011												
6	Provide Access to Code, Docs, and Data	0	8/21/2011	9/15/2011												

# Mean Layer Temperatures

**CDR Product:** TCDR - Monthly gridded anomalies for three layers (LT, MT, LS), 1978-2010 (60 GB)

**GEOSS Societal Benefit:** Energy, Climate, Ecosystems

## Project Status

- Sample files available to Mike Urzen to start work on NetCDF conversion
- Received Submission Agreement questionnaire from PI
  - Will need help from Archive branch on the 3 SAs

## Next Action / Milestone

- Work on source code and documentation



## Project Risks

- Data is ASCII format – Mike Urzen will convert to NetCDF
- PI has limited resources available to work on code clean up, comments and documentation

ID	Task Name	Status	Start	Stop	FY11 Q2			FY11 Q3			FY11 Q4		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	100	1/1/2011	1/15/2011									
2	Transfer Prep	20	1/15/2011	5/30/2011									
2a	Comment Source Code	50	1/15/2011	4/15/2011									
2b	Create Docs (CATBD, Flow Chart, MM, Readme)	20	3/15/2011	5/15/2011									
2c	Convert from ASCII to NetCDF	0	4/30/2011	5/30/2011									
3	Transfer Code, Docs, and Data	0	6/1/2011	6/30/2011									
4	Validate Code, Docs, and Data	0	7/1/2011	7/30/2011									
5	Archive Code, Docs, and Data	0	8/1/2011	8/30/2011									
6	Provide Access to Code, Docs, and Data	0	9/1/2011	9/30/2011									

PREDECISIONAL DRAFT INFORMATION

# Microwave Sounder FCDR

**CDR Product:** FCDR - AMSU-A Brightness Temperature, CH 7 & 9; 2001 - 2010 (100 GB)

**GEOSS Societal Benefit:** Climate, Water, Ecosystems

## Project Status

- PI will convert data to NetCDF
- Received Submission Agreement questionnaire

## Next Action / Milestone

- Expect CH9 at end of April, and CH7 in July



## Project Risks

- PI concerned about his source code being widely available  
- Need CDRP manager to discuss options with PI.

ID	Task Name	Status	Start	Stop	FY11 Q2			FY11 Q3			FY11 Q4		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	100	1/1/2011	1/15/2011									
2	Transfer Prep	50	1/15/2011	7/30/2011									
2a	Comment Source Code	50	1/15/2011	4/15/2011									
2b	Create Docs (CATBD, Flow Chart, MM, Readme)	50	3/15/2011	5/30/2011									
2c	Format Data for delivery	50	4/30/2011	7/30/2011									
3	Transfer Code, Docs, and Data	0	6/1/2011	6/30/2011									
4	Validate Code, Docs, and Data	0	7/1/2011	7/30/2011									
5	Archive Code, Docs, and Data	0	8/1/2011	8/30/2011									
6	Provide Access to Code, Docs, and Data	0	9/1/2011	9/30/2011									

PREDECISIONAL DRAFT INFORMATION

# Microwave Imager FCDR

**CDR Product:** FCDR - Intercalibrated SSM/I Brightness Temperatures (v6), 1987 – 2010 (1720 GB)

**GEOSS Societal Benefit:** Climate, Water, Ecosystems

## Project Status

- **POC drafted submission agreement using ATRACS**  
- several questions for archive branch
- Completed source code comments and created source code header document with robodoc
- Completed NetCDF conversion, just need to tweak some metadata after receiving further guidance from archive branch
- Received PI's coefficient description – POC can create documentation but will take some time

## Next Action / Milestone

- Work on ATBD and remaining documentation



## Project Risks

- PI will not assist making the data an operational CDR
- POC will be responsible for converting data to NetCDF, documentation, and commenting the code.

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	100	1/1/2011	1/15/2011												
2	Transfer Prep	20	1/1/2011	5/31/2011												
2a	Comment Source Code	100	1/1/2011	3/31/2011												
2b	Create Docs (CATBD, Flow Chart, MM, Readme)	25	1/1/2011	5/31/2011												
2c	Format data from binary to NetCDF	90	2/1/2011	4/30/2011												
3	Transfer Code, Docs, and Data	25	5/21/2011	6/21/2011												
4	Validate Code, Docs, and Data	25	6/15/2011	7/15/2011												
5	Archive Code, Docs, and Data	20	7/8/2011	8/8/2011												
6	Provide Access to Code, Docs, and Data	0	8/1/2011	8/31/2011												

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# Aerosol Properties

**CDR Product:** TCDR - Aerosol Optical Thickness (AOT), 1981 – 2010 (430 GB)

**GEOSS Societal Benefit:** Disasters, Health, Climate, Ecosystems

## Project Status

- POC drafted submission agreement using ATRACS  
- several questions for archive branch
- Ops branch is subsetting and converting to NetCDF
- Coordinating with archive branch on naming conventions

## Next Action / Milestone

- Complete netCDF conversion



## Project Risks

- Minimal for IOC
- Good candidate to test NRT production (FOC); would require significant changes to the current manual intensive process

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	100	11/29/10	12/15/10												
2	Transfer Prep	60	1/1/2011	3/31/2011												
2a	Comment Source Code	100	1/1/2011	1/30/2011												
2b	Create Docs (CATBD, Flow Chart, MM, Readme)	75	1/1/2011	3/31/2011												
2c	Subset CDR variables	50	2/1/2011	3/31/2011												
2d	Format data from HDF to NetCDF	50	2/15/2011	3/31/2011												
3	Transfer Code, Docs, and Data	50	3/21/2011	4/21/2011												
4	Validate Code, Docs, and Data	50	4/15/2011	5/15/2011												
5	Archive Code, Docs, and Data	0	5/8/2011	6/8/2011												
6	Provide Access to Code, Docs, and Data	0	6/1/2011	6/30/2011												

PREDECISIONAL DRAFT INFORMATION



# Outgoing Longwave Radiation - Top of Atmosphere

**CDR Product:** FCDR - HIRS OLR Time Series, monthly mean, 2.5 deg, 1979 – 2010 (CDR : 20 MB, Orbit Files: 700 GB)

**GEOSS Societal Benefit:** Energy, Climate, Ecosystems

## Project Status

- This CDR is close to the FOC level
  - code has passed security review
  - it's running on blade server
  - all input data comes from CLASS
  - we have reproduced PI's test data set
  - we're capable of recreating the data set and/or continued production
  - although FOC documentation and maturity requirements are still TBD
- Received final source code - PI replaced IDL with Fortran
- Received SA questionnaire from PI

## Next Action / Milestone

- Start submission agreement process
- Work on creating necessary documentation (PI sent CATBD template)
- Convert to NetCDF



## Project Risks

- Minimal risk involved

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	100	11/29/2010	12/15/2010												
2	Transfer Prep	75	12/15/2011	3/31/2011												
2a	Comment Source Code	90	12/15/2011	3/31/2011												
2b	Create Docs (CATBD, Flow Chart, MM, Readme)	75	1/1/2011	3/31/2011												
2c	Format data for delivery	50	3/1/2011	3/31/2011												
3	Transfer Code, Docs, and Data	0	4/1/2011	4/30/2011												
4	Validate Code, Docs, and Data	0	5/1/2011	5/31/2011												
5	Archive Code, Docs, and Data	0	6/1/2011	6/30/2011												
6	Provide Access to Code, Docs, and Data	0	7/1/2011	7/31/2011												

PREDECISIONAL DRAFT INFORMATION

# Sea Surface Temperature

**CDR Product:** TCDR - Pathfinder v5.2, Daily nighttime and daytime global SST fields, 1981-2010, (4000 GB)

**GEOSS Societal Benefit:** Climate, Water, Ecosystems, Agriculture

## Project Status

- NSTR
- Documentation hire passed on to CICS - documentation delivery timeline TBD
- Reprocessing complete for N18, sent to NODC for NetCDF conversion and validation
- Received NetCDF conversion code and a sample of NetCDF output from NODC – **No space for file storage and validation**
- First reprocessing completed but some data gaps were present

## Next Actions / Milestone

- 2<sup>nd</sup> reprocessing: Get missing data from CLASS, incorporate lake temp climo field



## Project Risks

- Processing from level 1b to HDF has been accomplished for all sats, some missing data gaps exist - ordered data to fill holes
- Source code documentation requires additional hire
- Final SST data set will be maintained at NODC

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	100	11/29/10	12/15/10												
2	Create HDF product (v5.2) 1981-2010 (UoM)	50	12/15/10	4/7/11				N18	N16	N7	N9	N11	N14			
3	Convert HDF to netCDF (NODC)	25	2/1/11	4/30/11												
4	Comment Source Code	5	2/15/11	6/30/11					NODC			CICS Hire?				
5	Create Documents	5	2/15/11	6/30/11					NODC			CICS Hire?				
6	Transfer Copy of Data, Code and Docs	5	5/1/11	7/15/11								Data		C&D		
7	Validate Data, Code and Docs	5	6/1/11	7/31/11									Data		C&D	
8	Archive Data, Code and Docs	0	7/1/11	8/15/11										Data	C&D	
9	Provide Access to Data, Code and Docs	0	8/15/11	9/15/11												
	(Point to Data served at NODC)															

PREDECISIONAL DRAFT INFORMATION

# BACKUP CDR -- ISCCP D1

**CDR Product:** TCDR - Mean Cloud Amount, 2.5 deg res, 3 hourly, 1983-2008, (1.4 GB)

**GEOSS Societal Benefit:** Energy, Climate, Water, Agriculture

## Project Status

- NSTR
- ISCCP is a backup CDR to ensure the NCDC performance metric is successfully met.
- Initial Assessment – Data and source code are very mature (could easily fill the gap if any of the FY11 CDRs fail to deliver)
- Product is already being archived

## Next Action / Milestone

- No effort - unless it looks like one of the other CDRs may fail, then primary work will be on documentation



## Project Risks

- Minimal

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment	Complete	11/29/10	12/15/10												
2	Transfer Prep		12/15/2011	2/28/2011												
2a	Comment Source Code		12/15/2011	1/30/2011												
2b	Create Documents		1/1/2011	2/28/2011												
2c	Format data for delivery		3/1/2011	3/31/2011												
3	Transfer Code, Docs, and Data		4/1/2011	4/30/2011												
4	Validate Code, Docs, and Data		5/1/2011	5/31/2011												
5	Archive Code, Docs, and Data		6/1/2011	6/30/2011												
6	Provide Access to Code, Docs, and Data		7/1/2011	7/31/2011												

PREDECISIONAL DRAFT INFORMATION

# FUTURE CDR -- Global Surface Albedo

**CDR Product:** TCDR – GOES coverage Surface Albedo, 10 day blocks, 4 km res, 2000-2003 (initially), (XX GB)

**GEOSS Societal Benefit:** Climate, Ecosystems, Agriculture

## Project Status

- EUMETSAT contact has been pulled to other tasks until mid May  
- Slips the plan to process GOES test set to the end of July
- Initial Assessment revealed it would not meet CDR IOC requirements by FY11, but the High Visibility of this project will ensure that work continues to progress as quickly as possible

## Next Action / Milestone

- Stage GOES test data



## Project Risks

- Requires extensive coordination with EUMETSAT for code, documentation and validation

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Initial Assessment		11/29/10	12/15/10												
2	Stage 4 yrs of GOES data		12/15/10	1/14/11												
3	Write GOES preprocessing sw		12/8/10	1/7/11												
4	Write Model Ozone/H2Ov ingest		1/7/11	2/6/11												
5	Generate GOES-12 LUT		1/1/11	1/31/11												
6	Format Data for archive (NetCDF4)		1/1/11	3/2/11												
7	Receive/test AREA ingestor		3/3/11	5/10/11												
8	Processing - 4 year POR		5/1/11	7/30/11												
9	Transfer Remaining Docs		6/22/11	7/7/11												
10	Validate Code, Docs, and Data		7/8/11	7/15/11												
11	Archive Code, Docs, and Data		7/16/11	8/7/11												
12	Provide Access to Code, Docs, and Data		8/8/11	8/18/11												

PREDECISIONAL DRAFT INFORMATION

### Weekly Report – Mar 25, 2011

#### 1. VIIRS

- Developing code to generate the VIIRS C-RDR.

#### 2. CrIS

- Updated CrIS IDPS software not available to contractors (Cal/Val teams, NASA SDS, ADL are also affected)
- Evaluating processing of C-RDR by MATLAB and IDL

#### 3. ATMS

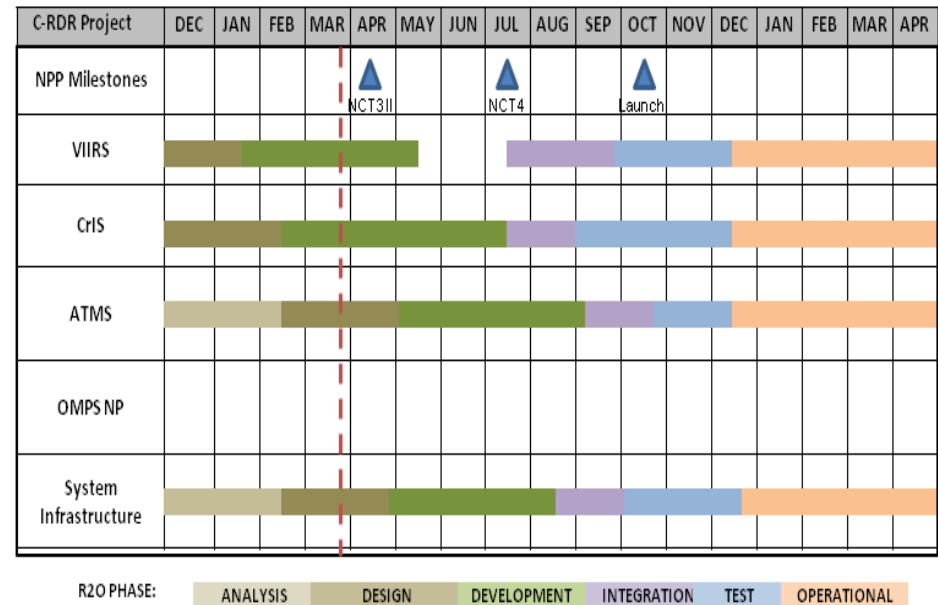
- IDPS ATMS algorithm executing in ADL at NCDC

#### 4. OMPS NP

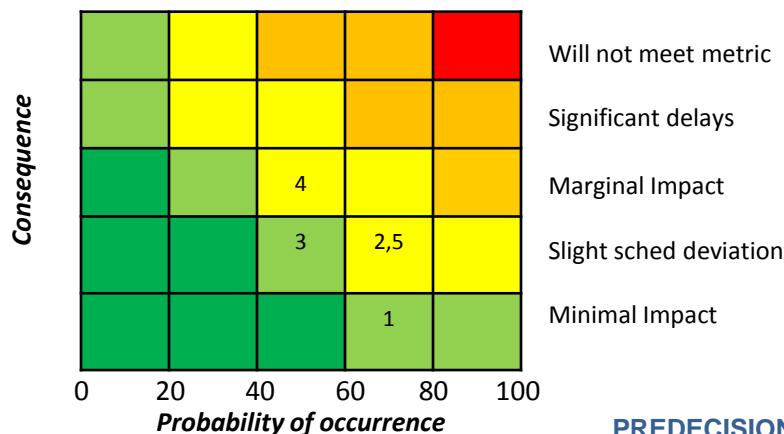
- Postponed** to focus resources on system infrastructure

#### 5. System Infrastructure

- Developing an ingest test using the CLASS RDR aggregation
- Setting up configuration and software for the Blade Server
- Met with CLASS requirement team to discuss charter for C-RDRs



### Risk Matrix



### Risk and Mitigation

#### VIIRS, CrIS, ATMS, OMPS NP, System Infrastructure -

- Short schedule to NPP launch on October 2011. Hiring additional software developers on hold. Need to re-adjust the schedule.
- Operational software is under maintenance, updated versions may affect C-RDR ported version. Working with old (2007) version of CrIS code.

#### System Infrastructure -

- Availability of automated receipt of NPP RDRs from the CLASS system. Need to test ingest of RDRs from CLASS and develop an automated mechanism for re-requesting data.
- Capability of CLASS to ingest and archive C-RDRs.

PREDECISIONAL DRAFT INFORMATION

# Visible Infrared Imaging Radiometer Suite (VIIRS)

**C-RDR Product:** Raw sensor measurements with usage and provenance metadata in easily accessible netCDF4 format

**GEOSS Societal Benefit:** Climate, Water, Ecosystems, Agriculture, Biodiversity, Energy

## Project Status

- Ported operational algorithms (NASA Land PEATE)
- Defining the C-RDR format, data, and metadata
- Preparing the VIIRS C-RDR Product Specification for review
- Converting the supporting data files to netCDF4
- Merged latest Land PEATE and IDPS modifications into C-RDR baseline
- Evaluating IDPS latest release changes in Algorithm Development Library (ADL) baseline
- Evaluating ADL for processing granule aggregations
- ADL modified to process aggregated RDRs
- Developing software to create the VIIRS C-RDR , reusing ADL software

## Next Action / Milestone

- Development complete for the VIIRS C-RDR



## Project Risks

- NPP Launch Date: October 25, 2011
- Complexity of the NPP/JPSS RDRs and operational software
- Operational software is under maintenance, updated versions may affect C-RDR ported version

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1			FY12 Q2		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Analysis	Completed	10/23/2009	5/4/2010																		
2	Design	Completed	5/6/2010	1/5/2011																		
3	Development		1/6/2011	5/13/2011																		
3a	Develop VIIRSS processing component	60%	1/6/2011	3/4/2011																		
3b	Test VIIRS processing component		3/7/2011	5/13/2011																		
4	Integration		7/21/2011	8/26/2011																		
5	Test		9/1/2011	12/19/2011																		
5a	Dry Runs/some with launch data		9/1/2011	12/12/2011																		
5b	System Acceptance Test		12/12/2011	12/19/2011																		
6	Operational		12/20/2011																			

PREDECISIONAL DRAFT INFORMATION

# Cross-track Infrared Sounder (CrIS)

**C-RDR Product:** Raw sensor measurements with usage and provenance metadata in easily accessible netCDF4 format

**GEOSS Societal Benefit:** Climate, Water, Energy

## Project Status

- Ported operational algorithms (Space Dynamics Lab at Utah State)
- Defining the C-RDR format, data, and metadata
- Merged updated IDPS code and formats into the C-RDR baseline
- Tracking down a version of the CrIS code with telemetry updates
- Defining the netCDF4 structure for the C-RDR and developing software for writing the C-RDR
- CrIS IDPS software changes are not available to contractors. This affects C-RDR and ADL development and Cal/Val teams, NASA SDS.
- Evaluating processing of C-RDR with MATLAB and IDL

## Next Action / Milestone

- Complete definition of CrIS C-RDR



## Project Risks

- NPP Launch Date: October 25, 2011
- Need updated version of CrIS code. Current version - 2007.
- Complexity of the NPP/JPSS RDRs and operational software
- Operational software is under maintenance, updated versions may affect C-RDR ported version

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1			FY12 Q2		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Analysis	Completed	8/16/2010	11/24/2010																		
2	Design	80.00%	11/26/2010	2/15/2011																		
3	Development		2/16/2011	7/22/2011																		
3a	Develop CrIS processing component	20.00%	2/16/2011	5/11/2011																		
3b	Test CrIS processing component		5/12/2011	7/22/2011																		
4	Integration		7/25/2011	8/19/2011																		
5	Test		9/1/2011	12/19/2011																		
5a	Dry Runs/some with launch data		9/1/2011	12/12/2011																		
5b	System Acceptance Test		12/12/2011	12/19/2011																		
6	Operational		12/20/2011																			

# Advanced Technology Microwave Sounder (ATMS)

**C-RDR Product:** Raw sensor measurements with usage and provenance metadata in easily accessible netCDF4 format

**GEOSS Societal Benefit:** Climate, Water, Energy

## Project Status

- Obtained ported operational algorithms (Space Dynamics Lab at Utah State)
- Working to get the ported IDPS software running at NCDC
- Evaluating IDPS algorithms in ADL
- IDPS ATMS algorithm in ADL executing at NCDC
- Verified processing of ATMS algorithms.
- Identifying code and data structures required for C-RDR processing.

## Next Action / Milestone

- Define the C-RDR data and metadata



## Project Risks

- NPP Launch Date: October 25, 2011
- Complexity of the NPP/JPSS RDRs and operational software
- Operational software is under maintenance, updated versions may affect C-RDR ported version
- Developer shares time working NPP and CLASS issues.

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1			FY12 Q2		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Analysis	Complete	10/29/2010	2/10/2011																		
2	Design	30.00%	2/11/2011	4/29/2011																		
3	Development		5/2/2011	9/7/2011																		
3a	Develop ATMS processing component		5/2/2011	6/27/2011																		
3b	Test ATMS processing component		6/28/2011	9/7/2011																		
4	Integration		9/8/2011	10/20/2011																		
5	Test		10/21/2011	12/19/2011																		
5a	Dry Runs/some with launch data		10/21/2011	12/12/2011																		
5b	System Acceptance Test		12/12/2011	12/19/2011																		
6	Operational		12/20/2011																			

PREDECISIONAL DRAFT INFORMATION



# Ozone Mapping Profile Suite (OMPS) Nadir Profiler (NP)

**C-RDR Product:** Raw sensor measurements with usage and provenance metadata in easily accessible netCDF4 format

**GEOSS Societal Benefit:** Climate, Energy

## Project Status

- Delayed OMPS NP development to focus resources on system infrastructure and other sensors

Postponed

## Next Action / Milestone

- Obtain IDPS software when the OMPS modifications stabilize



## Project Risks

- OMPS NP C-RDRs will not be available at launch. Mitigation: hire another developer for OMPS NP.
- Complexity of the NPP/JPSS RDRs and operational software
- Operational software is under maintenance, updated versions may affect C-RDR ported version

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1			FY12 Q2		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Analysis		2/1/2011	4/12/2011																		
2	Design		4/13/2011	7/7/2011																		
3	Development		7/8/2011	11/15/2011																		
3a	Develop OMPS NP processing component		7/8/2011	9/1/2011																		
3b	Test OMPS NP processing component		9/2/2011	11/7/2011																		
4	Integration		11/8/2011	12/7/2011																		
5	Test		12/8/2011	12/19/2011																		
5a	Dry Runs/some with launch data		12/8/2011	12/12/2011																		
5b	System Acceptance Test		12/12/2011	12/19/2011																		
6	Operational		12/20/2011																			

PREDECISIONAL DRAFT INFORMATION

# C-RDR System Infrastructure

**C-RDR Product:** Infrastructure to automate the production of the C-RDRs.

**GEOSS Societal Benefit:** None

## Project Status

- Analyzing existing ingest and dissemination capabilities.
- Working with CLASS to test ingest of RDRs.
- Working on database infrastructure design.
- Working on the Archive Recommendation Package for C-RDRs.
- Analysis complete of existing infrastructure.
- Working with RSAD projects to define process to transfer data to and from CLASS.
- Received aggregated test data from CLASS.
- Developing an ingest test for the aggregated RDRs received from CLASS.
- Setting up configuration files and software for the ingest test.

## Next Action / Milestone

- Complete design of system infrastructure.



## Project Risks

- NPP Launch Date: October 25, 2011
- Need to hire additional software developer to meet schedule.
- Ability of CLASS to provide full stream of RDRs and ability to ingest stream of C-RDRs.
- Need to develop an automated re-request mechanism for CLASS.

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q1			FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1			FY12 Q2		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Analysis	Completed	9/29/2010	2/10/2011																		
2	Design	25.00%	2/11/2011	4/22/2011																		
3	Development		3/7/2011	8/9/2011																		
3a	Develop & Test sensor algorithms processing		4/25/2011	8/9/2011																		
3b	Develop & Test ingest	20.00%	3/7/2011	4/8/2011																		
3c	Develop & Test dissemination		4/11/2011	5/27/2011																		
4	Integration		7/21/2011	9/28/2011																		
5	Test		9/1/2011	12/19/2011																		
5a	Dry Runs/some with launch data		9/1/2011	12/12/2011																		
5b	System Acceptance Test		12/12/2011	12/19/2011																		
6	Operational		12/20/2011																			

PREDECISIONAL DRAFT INFORMATION

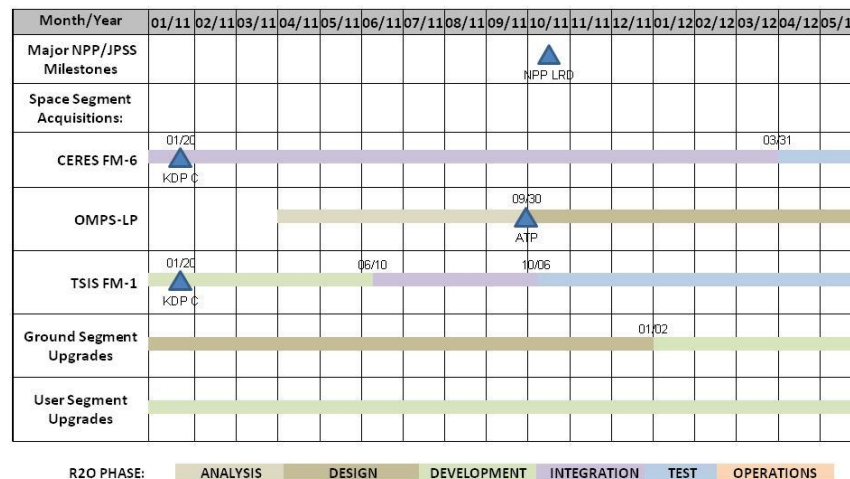
# CDR Program Office

## JPSS Climate Sensors and Program Status

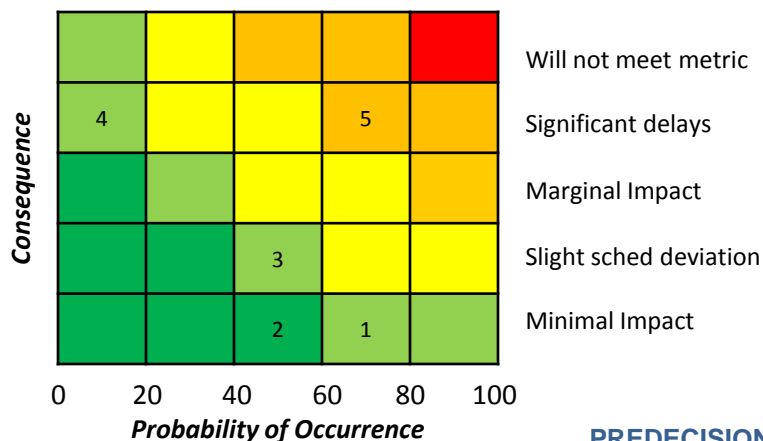
### Current Status

- ① JPSS Climate Sensors are all on track:
  - CERES FM-6 will fly on JPSS-1
  - OMPS-LP will fly on JPSS-2
  - TSIS FM-1 will fly on a TBD Free-Flyer
- ②
- ③
- ④ JPSS Program is still in transition:
  - JPSS L1RD, Version 4.4, dated December 15, 2010 is latest draft; it still has not been signed
  - Launch Readiness Dates (LRDs) are 2015 for JPSS-1 and 2018 for JPSS-2
  - NOAA/NESDIS/OSD provided funding to JPSS Program for Ground Segment Upgrades and post-delivery support
- ⑤ User Segment Upgrades are behind schedule

### Current Schedules



### Risk Matrix



### Risks and Mitigation

- FY-11 funding for CERES FM-6, OMPS-LP, and TSIS FM-1 R2O transition activities, as well as User Segment upgrades, may be in jeopardy due to Congressional actions
  - Could cause significant delays in the delivery of these capabilities and readiness for NPP and JPSS-1 launches
- While TSIS FM-1 acquisition is on track, platform it will fly on is still TBD
- R2O Transition and Instrument Support teams for CERES FM-6 and TSIS FM-1 are needed ASAP
  - Need to support JPSS Instrument Staff and NASA/LaRC (for CERES) and LASP (for TSIS) Science Team meetings

PREDECISIONAL DRAFT INFORMATION

# Clouds & Earth's Radiant Energy System (CERES) FM-6

**Purpose:** Continuity of Earth Radiation Budget (ERB) Measurements

**GEOSS Societal Benefit:** Climate

## Project Summary

- CERES will fly on the NPP and JPSS-1 satellites which have LRDs in late 2011 and 2015, respectively
- NOAA/NESDIS/OSD funded the acquisition of the CERES FM-5 (on NPP) and FM-6 (on JPSS-1) instruments by NASA's Langley Research Center (LaRC) and Northrup Grumman Aerospace Systems (NGAS)
- OSD is also responsible, as the instrument provider, for any required upgrades to the JPSS Common Ground Segment (CGS) and CERES FM-6 post-launch instrument support
- JPSS Program is responsible for integrating and flying the CERES FM-6 instrument on the JPSS-1 spacecraft, post-launch satellite operations, data collection and initial processing, and delivering processed data via the Interface Data Processing Segment (IDPS) to the NOAA Archive

## Next Action/Milestone

- CERES Instrument SAR/PSRR is scheduled for June 2011

## Project Risks

- Changing the total and shortwave radiometric accuracy requirements to accommodate limitations in the current hardware design for FM-6
  - NASA's performance specifications have become the threshold and NOAA's requirements will be the objective
- Defining the scope of post-launch support
- Negotiating an agreement between NOAA/NESDIS/NCDC and NASA/LaRC for the R2O transition of CERES higher-level data processing (or reprocessing) and Climate Data and Information Record (CDR/CIR) generation capabilities

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Acquisition of CERES FM-6 Instrument															
2	Acquisition of Ground Segment Upgrades															
3	Acquisition of User Segment Upgrades															
3a	Analysis															
3b	Design															
3c	Development															
3d	Integration															
3e	Test															
3f	Operations															

PREDECISIONAL DRAFT INFORMATION

3/25/2011

POC: Markham

# Ozone Mapping & Profiler Suite-Limb Profiler (OMPS-LP)

**Purpose:** Continuity of Stratospheric Ozone Measurements

**GEOSS Societal Benefit:** Climate and Energy

## Project Summary

- OMPS-LP will fly on the NPP and JPSS-2 satellites which have LRDs in late 2011 and 2018, respectively
- NOAA/NESDIS/OSD has funded the acquisition of the OMPS-LP instruments by NASA (for NPP) and the JPSS Program (for JPSS-2)
- OSD is also responsible, as the instrument provider, for any required upgrades to the JPSS Common Ground Segment (CGS) and OMPS-LP post-launch instrument support
- JPSS Program is responsible for integrating and flying the OMPS-LP instrument on the JPSS-2 spacecraft, post-launch satellite operations, data collection and initial processing, and delivering processed data via the Interface Data Processing Segment (IDPS) to the NOAA Archive

## Next Action/Milestone

- Authorization to Proceed (ATP) decision for the acquisition of the JPSS-2 OMPS-LP is expected by the end of September 2011

## Project Risks

- Drafting a Level 1 Requirements Document (L1RD) and securing an agreement between the JPSS Program and NOAA for the acquisition of the OMPS-LP instrument for JPSS-2
- Negotiating an agreement between NASA/GSFC and NOAA/NESDIS/NCDC for the R2O transition of OMPS-LP higher-level data processing (or reprocessing) and Climate Data and Information Record (CDR/CIR) generation capabilities

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Acquisition of OMPS-LP Instrument															
2	Acquisition of Ground Segment Upgrades															
3	Acquisition of User Segment Upgrades															
3a	Analysis															
3b	Design															
3c	Development															
3d	Integration															
3e	Test															
3f	Operations															

PREDECISIONAL DRAFT INFORMATION

3/25/2011

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POC: Markham

# Total Solar Irradiance Sensor (TSIS) FM-1

**Purpose:** Continuity of Total and Spectral Solar Irradiance Measurements

**GEOSS Societal Benefit:** Climate and Energy

## Project Summary

- TSIS will fly on the NPP satellite, as a free-flyer in conjunction with the JPSS-1 satellite, and on the JPSS-2 satellite which have Launch Readiness Dates (LRDs) in late 2011, 2015, and 2018, respectively
- NOAA/NESDIS/OSD funded the acquisition of the TSIS FM-1 instrument by NASA and the Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado
- OSD is also responsible, as the instrument provider, for any required upgrades to the JPSS Common Ground Segment (CGS) and TSIS post-launch instrument support
- JPSS Program is responsible for integrating and flying the TSIS FM-1 instrument, post-launch satellite operations, data collection and initial processing, and delivering processed data via the Interface Data Processing Segment (IDPS) to the NOAA Archive

## Next Action/Milestone

- Integration and testing of the TSIS FM-1 instrument is scheduled to begin on June 10, 2011

## Project Risks

- Finalizing the Level 1 Requirements Document (L1RD) for TSIS FM-1
- Conducting a mission trade study in conjunction with the JPSS Program to determine the most efficient launch option for TSIS FM-1
- Negotiating an agreement between NASA/GSFC, LASP, and NOAA/NESDIS/NCDC for the Research-to-Operations (R2O) transition of TSIS higher-level data processing (or reprocessing) and Climate Data and Information Record (CDR/CIR) generation capabilities

## Project Schedule

ID	Task Name	Status	Start	Stop	FY11 Q2			FY11 Q3			FY11 Q4			FY12 Q1		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Acquisition of TSIS FM-1 Instrument															
2	Acquisition of Ground Segment Upgrades															
3	Acquisition of User Segment Upgrades															
3a	Analysis															
3b	Design															
3c	Development															
3d	Integration															
3e	Test															
3f	Operations															

PREDECISIONAL DRAFT INFORMATION

# Other Tasks

- Reviewing cost models for possible application to NCDC's end-to-end Data Stewardship system
  - Revised the Work Breakdown Structure (WBS) for the End-to-End Stewardship System; forwarded a copy to Ed Kearns for his review and awaiting his feedback
  - Revised the template for the End-to-End Stewardship System Cost Model; still need inputs from SMEs to fill-in estimates for Staffing, Infrastructure, and Support costs
- Developing storyboards for the four CDRs that were transitioned from research to operations in FY 2010
  - Collected graphics from Sara Veasey; currently reviewing them for their applicability
  - Began working on the first of four storyboards (i.e., PATMOS-X)
- Continuing to forward FY 2011 CDR Program Grant proposals to mail reviewers
  - 88% of mail reviewers have been sent proposals
  - 86% of mail reviews returned
- Gathering information on recently held Agribusiness Workshop
  - Contacted Eileen Shea (NCDC/CSMD) regarding the Workshop
  - Awaiting notification from Tamara Houston of a meeting to discuss the Workshop